

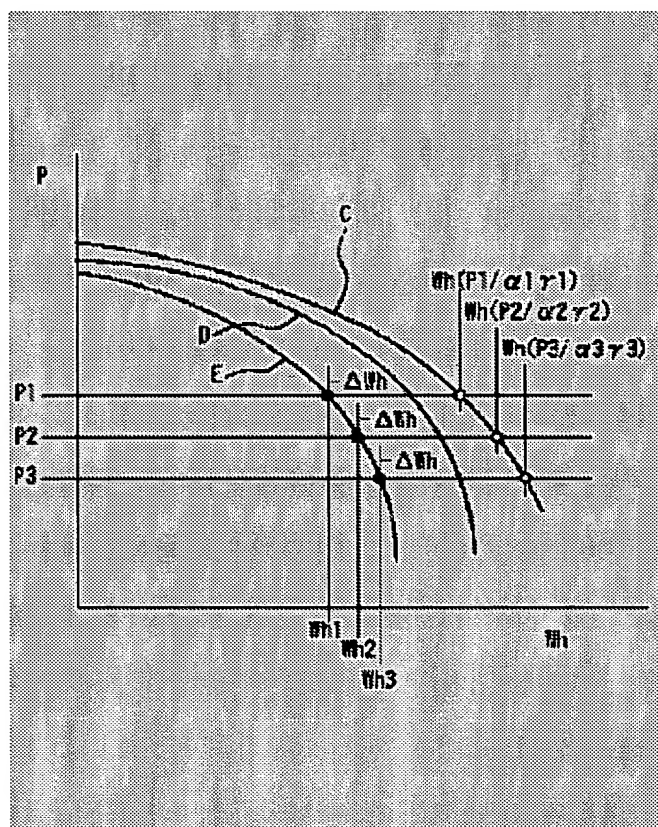
## BATTERY DISCHARGE VALUE MEASUREMENT DEVICE

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- **International:** H02J7/00; B60L3/00; G01R31/36  
- **European:**  
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### Abstract of JP2000014019

**PROBLEM TO BE SOLVED:** To correct a detection error. **SOLUTION:** An output power  $P_1$  and a discharge watt-hour  $Wh_1$  are detected. Further, a temperature and an internal resistance deterioration factor  $\gamma_1$  at that time are also detected. A corresponding temperature deterioration factor  $\alpha_1$  is obtained by a temperature table. By using the output power  $P_1$ ,  $P_1/(\alpha_1 \gamma_1)$  is calculated to correct the internal resistance deterioration and the temperature deterioration into initial states and the estimated value of a discharge watt-hour  $Wh$  ( $P_1/(\alpha_1 \gamma_1)$ ) is obtained in accordance with initial characteristics  $C$ . The obtained value is a discharge watt-hour before the capacitance deterioration and, if the value is multiplied by a capacitance deterioration factor  $\beta$ , an actual discharge watt-hour shown by characteristics  $D$  is obtained. The correction formula and a correction formula obtained by adding a detection error correction value  $\Delta Wh$  to the detection value  $Wh_1$  are made to be equal to each other to obtain a 1st calculation formula. When the discharge is progressed in a predetermined manner, 2nd and 3rd calculation formulae are obtained. By satisfying the formulae simultaneously, the detection error correction value  $\Delta Wh$  and the capacitance deterioration factor  $\beta$  can be obtained. By correcting the detection value of the discharge watt-hour with the detection error correction value  $\Delta Wh$ , the actual discharge watt-hour detection value can be obtained.



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